

Kotlin - if...else Expression

Kotlin **if...else** expressions work like an **if...else** expression in any other Modern Computer Programming. So let's start with our traditional if...else statement available in Kotlin.

Syntax

The syntax of a traditional **if...else** expression is as follows:

```
if (condition) {  
    // code block A to be executed if condition is true  
} else {  
    // code block B to be executed if condition is false  
}
```

Here **if** statement is executed and the given **condition** is checked. If this condition is evaluated to **true** then code block A is executed, otherwise program goes into else part and code block B is executed.

Example

You can try the following example:

```
fun main(args: Array<String>) {  
    val age: Int = 10  
  
    if (age > 18) {  
        print("Adult")  
    } else {  
        print("Minor")  
    }  
}
```

When you run the above Kotlin program, it will generate the following output:

Minor

Kotlin if...else Expression

Kotlin **if...else** can also be used as an expression which returns a value and this value can be assigned to a variable. Below is a simple syntax of Kotlin **if...else** expression:

Syntax

```
val result = if (condition) {  
    // code block A to be executed if condition is true
```

```

} else {
    // code block B to be executed if condition is false
}

```

If you're using if as an expression, for example, for returning its value or assigning it to a variable, the else branch is mandatory.

Examples

```

fun main(args: Array<String>) {
    val age:Int = 10

    val result = if (age > 18) {
        "Adult"
    } else {
        "Minor"
    }
    println(result)
}

```

When you run the above Kotlin program, it will generate the following output:

Minor

You can omit the curly braces {} when **if** has only one statement:

```

fun main(args: Array<String>) {
    val age:Int = 10

    val result = if (age > 18) "Adult" else "Minor"
    println(result)
}

```

When you run the above Kotlin program, it will generate the following output:

Minor

You can include multiple statements in **if...else** block, in this case the last expression is returned as the value of the block. Try the following example:

```

fun main(args: Array<String>) {
    val age:Int = 10

    val result = if (age > 18) {
        println("Given condition is true")
        "Adult"
    } else {
        println("Given condition is false")
        "Minor"
    }
    print("The value of result : ")
    println(result)
}

```

When you run the above Kotlin program, it will generate the following output:

```
Given condition is false
The value of result : Minor
```

Kotlin if...else...if Ladder

You can use **else if** condition to specify a new condition if the first condition is false.

Syntax

```
if (condition1) {
    // code block A to be executed if condition1 is true
} else if (condition2) {
    // code block B to be executed if condition2 is true
} else {
    // code block C to be executed if condition1 and condition2 are false
}
```

Example

```
fun main(args: Array<String>) {
    val age:Int = 13

    val result = if (age > 19) {
        "Adult"
    } else if ( age > 12 && age < 20 ){
        "Teen"
    } else {
        "Minor"
    }
    print("The value of result : ")
    println(result)
}
```

When you run the above Kotlin program, it will generate the following output:

```
The value of result : Teen
```

Kotlin Nested if Expression

Kotlin allows to put an **if** expression inside another **if** expression. This is called **nested** if expression

Syntax

```
if(condition1) {
    // code block A to be executed if condition1 is true
```

```

if( condition2) {
    // code block B to be executed if condition2 is true
}else{
    // code block C to be executed if condition2 is fals
}
} else {
    // code block D to be executed if condition1 is false
}

```

Example

```

fun main(args: Array<String>) {
    val age:Int = 20

    val result = if (age > 12) {
        if ( age > 12 && age < 20 ){
            "Teen"
        }else{
            "Adult"
        }
    } else {
        "Minor"
    }
    print("The value of result : ")
    println(result)
}

```

When you run the above Kotlin program, it will generate the following output:

The value of result : Adult

Quiz Time (Interview & Exams Preparation)

Q 1 - Which of the following is true about Kotlin if expression?

- A - Kotlin support traditional if...else expression.
- B - Kotlin if...else expression can be nested.
- C - Kotlin if...else expression returns a value which can be assigned to a variable.
- D - All of the above

Q 2 - Which of the following is not supported by Kotlin?

- A - if...else if...else
- B - if...then...else

C - if...else...

D - None of the above

Q 3 - What will be the output of the following code?

```
fun main(args: Array<String>) {  
  
    var x = 20  
    var y = 15  
    var z = "Mango"  
  
    val result = if (x > y ) {  
        z = "Orange"  
    } else {  
        z = "Apple"  
    }  
    println("Value of result = $z")  
}
```

A - Mango

B - Orange

C - Apple

D - None of the above